

Prostatectomy in a County Hospital

A Review of 677 Cases in a Six-Year Period

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A FACTUAL REPORT and a critical analysis of the results of prostatectomy done in the San Diego County Hospital over a period of six years, 1947 to 1953, is presented. The patients were operated upon almost entirely (97.5 per cent) by residents under the supervision of visiting staff members. For purposes of teaching, all methods were employed, but in the majority of cases the transurethral method was used.

The total number of cases reviewed was 737. Sixty cases were excluded from the series because of poor follow-up or incomplete records. This left 677 consecutive cases. Transurethral prostatectomy was performed on 620 patients (91.6 per cent). Open prostatectomy by one of the three classical methods was used in 57 cases (8.4 per cent). Of the patients subjected to transurethral prostatectomy, 79.9 per cent had benign and 11.9 per cent had malignant prostatic obstruction. In the cases in which open operation was done, the routes chosen were: retropubic, 1.5 per cent; suprapubic, 3.5 per cent; and perineal, 3.4 per cent. In three cases radical perineal prostatectomy was done. The open prostatectomies are not included for statistical value, but to emphasize the authors' recognition of methods other than the transurethral.

PREOPERATIVE DATA

The operative risk of the patients in this group was far worse than in any comparable series of private patients, but was similar to that in other charity institutions. The average age of the group was 73.4 years, and the operative risk was estimated at poor to fair in 63 per cent. Obstructive symptoms were found in 92.9 per cent, and 41.6 per cent of the patients had uremia. The high incidence of preoperative urethral stricture (22.1 per cent) further increased the operative risk (see Table 1).

OPERATIVE DATA

Transurethral prostatectomy was completed in one stage in 85.6 per cent, in two stages in 13.9 per cent, and in three stages in 0.5 per cent of the patients. The average weight of tissue removed trans-

• Transurethral procedures were used in 620 of 677 cases in which prostatectomy was done (principally by residents supervised by a urologist) at a county hospital in a six-year period. Open operations were used in the other 57 cases.

Results were classified as "excellent" in 46.8 per cent of the transurethral cases and as "good" in 36.3 per cent.

urethrally was 25.2 grams from patients with malignant disease, and 31.5 grams from those with benign hypertrophy (see Table 2). More than 40 grams was removed in 29 per cent of cases and more than 100 grams in 3 per cent. As little as 4 grams and as much as 214 grams was removed transurethrally. The largest amount of tissue removed at a single operation was 190 grams. The average amount of tissue removed by open prostatectomy was 104 grams. This weight range varied from 35 to 340 grams. Loss of blood, as measured during 173 transurethral operations, averaged 230 cc., or 6 cc. per gram of tissue removed. Ten patients who had open operation had an average blood loss of 506 cc., or 5 cc. per gram of tissue removed. Associated operative procedures, including vasectomy, meatotomy, litholopaxy, perineal urethrotomy and transurethral resection of bladder tumors, were carried out in 65.7 per cent of the cases.

POSTOPERATIVE DATA

The catheter was removed on the fifth day after transurethral operation and on the fifteenth day after open operation. The average postoperative hospital stay was nine days after transurethral prostatectomy and 18 days after open operation. It is estimated that the need for domiciliary care for many of the patients increased the average stay by at least three days. The corrected figures, then, would be six days after transurethral and 15 days after open prostatectomy. Stricture of the urethra, as interpreted by any tightness to a No. 20 sound 30 days after operation, occurred in 9.5 per cent of patients subjected to transurethral prostatectomy. True stricture in the ordinary sense of the word occurred in less than 2 per cent. Bladder neck contrac-

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TABLE 1.—Preoperative data on 677 patients with prostatic disease

	Transurethral Prostatectomy	Open Prostatectomy
Average age (years).....	73.3	74.7
	(Per cent)	(Per cent)
Pyuria	67.3	52.6
Uremia	41.6	33.3
Residual Urine—above 100 cc.....	80.0	78.0
Stricture of Urethra.....	22.1	14.0
Previous Prostatic Operations:		
Transurethral	13.9	7.0
Open	1.1	0.0
Risk: Good	36.1	36.8

ture occurred in 2.6 per cent of patients who had transurethral and in 5.3 per cent of those who had open prostatectomy. Nearly all the patients in the series were examined cystoscopically after operation. This led to the discovery of residual tissue in the prostatic fossa in 3.8 per cent of patients after transurethral and in 7.8 per cent after open prostatectomy.

MORTALITY AND RESULTS

The mortality rate in the group subjected to transurethral operation was 3.7 per cent, and in the open prostatectomy group it was 10.5 per cent. Of the 23 patients who died after transurethral prostatectomy, six died of coronary occlusion, four of pulmonary embolus, three of lower nephron nephrosis, four of septicemia, one of uremia and five of progressive cardiac decompensation. Cause of death was verified by autopsy in 20 of the 23 cases. The aver-

TABLE 2.—Results of surgical treatment of 677 patients with prostatic disease

	Transurethral 620 Cases	Open Operation 57 Cases
Catheter out (days postoperative) ..	5.1	15.2
Hospital (days postoperative).....	9.0	18.0
Average Weight of Tissue		
Removed (grams).....	31.5	104.1
Persistent Pyuria (months).....	4.5	5.4
	(Per cent)	(Per cent)
Tissue Left	3.8	7.8
Incontinence, Temporary	14.5	31.6
Incontinence, Permanent	1.8	0
Extravasation	2.6	0
Hemorrhage, Early.....	4.2	3.5
Hemorrhage, Late	4.4	1.8
Lower Nephron Nephrosis.....	0.5	1.75
Epididymitis	6.1	12.3
Stricture of Urethra.....	9.5	0
Stricture of Meatus.....	3.3	0
Periurethral Abscess	0.2	0
Bladder Neck Contracture	2.6	5.3
Fever of 102 Degrees F. or above..	22.6	42.1
Mortality	3.7	10.5
Results:		
Excellent	46.8	31.6
Good	36.3	43.8
Fair	8.2	12.3
Bad	8.7	12.3

age age of these patients was 78 years. Of the six patients who died after open prostatectomy, two died of postoperative shock and hemorrhage, one of pulmonary embolus, one of myocardial infarction and two of inanition.

The final clinical results were excellent or good in 83 per cent of patients who had transurethral prostatectomy and in 75 per cent of those who had open operation.

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